

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal at the intersection of MD 410 (East West Hwy) and Chelton Road in Montgomery County. The existing pedestal pole structure shall be replaced by a new mast arm Traffic Signal with video detection and Countdown pedestrian signals with audible pushbuttons. MD 410 (East West Hwy) is assumed to run an east-west direction.

II. INTERSECTION OPERATION

- The intersection shall continue to operate in a NEMA two-phase, fully-actuated mode, with the MD 410 (East West Hwy) approach running in its own phase. The pedestrian phases across MD 410 (East West Hwy) shall now be Countdown pedestrian phases with audible pushbutton actuation. The pedestrian phases on recall across Chelton Road shall now be Countdown pedestrian phases with audible pushbuttons. Chelton Road shall continue to operate in its own phase.
- A full-traffic-actuated, eight-phase controller with video interface, 2-wire Control Unit and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.
- Montgomery County signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery County Signal Shop for testing and programming.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the Montgomery County Signal Shop. Contact Mr. Kamal Hamud at (240) 777-8761 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

4. APS will function as follows:

FOR MD 410 (EAST WEST HWY)

- When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross East West Hwy".
- When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

FOR CHELTON ROAD

- When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Chelton Road".
- When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Jeff Wentz
Assistant District Engineer - Traffic
Phone: (301) 513-7358

Mr. Ed Rodenhizer
Signal Shop
410-787-7652

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Sonny Bailey
Sign Shop
410-787-7676

Mr. Augie Rebish
District Engineer - Utility
Phone: (301) 513-7350

The power company representative is:

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Steve Custer
PEPCO Customer Design
201 W Gude Dr.
Rockville, MD 20850
Phone: 301 548-4333

EQUIPMENT LIST

A.	EQUIPMENT TO BE SUPPLIED BY S.H.A..	QUANTITY
CAT NO.	DESCRIPTION	
971017	EIGHT PHASE (FULLY ACTUATED) CONTROLLER AND CABINET - BASE MOUNT	1 EA
973023	SHEET ALUMINIUM SIGNS	42 SF
	D3-2 "Chelton Road" sign, sign, (variable x 16").	1 EA
	D3-2 "East West Hwy" sign, sign, (variable x 16").	1 EA
	R3-2 "NO LEFT TURN" sign, (30" x 30").	1 EA
	R10-11 mod "NO TURN ON RED / 6:30-8:30 AM / 1:30-3:00 PM / MONDAY-FRIDAY" sign, (30" x 24").	1 EA
	Pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS EAST-WEST HWY").	4 EA
	Pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS CHELTON AVENUE").	2 EA
	R5-9 "WRONG WAY" sign, (36" x 24").	1 EA

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

CAT NO.	DESCRIPTION	QUANTITY
120662	REMOVAL OF EXISTING PAVEMENT LINE MARKINGS - ANY WIDTH	370 SF
203030	TEST PIT EXCAVATION	315 8 CY
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	300 SF
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	70 SF
634300	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH	100 LF
655105 655104	4 4 INCH CONCRETE SIDEWALK	540 360 SF
655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS	30 SF
800000A	16" COUNTDOWN PEDESTRIAN SIGNAL HEAD	6 EA
800000A	2 WIRE CONTROL UNIT	1 EA
800000A	AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	6 EA
800000A	INSTALL SPLICE CABINET	1 EA
800000A	3 WIRE 1 CONDUCTOR (NO. 250 KCMIL) ELECTRICAL CABLE	65 195 LF
800000A 805050	3 WEATHERHEAD.	1 1 EA
801004	CONCRETE FOR SIGNAL FOUNDATION	9 CY
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	480 LF
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	220 LF
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	30 LF
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	165 LF
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	40 LF
807202	METERED SERVICE PEDESTAL	1 EA
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	5 EA
813014	INSTALL GROUND MOUNTED SIGN	12 SF
813015	INSTALL OVERHEAD SIGN	30 SF
816001	VIDEO DETECTION CAMERA	2 EA
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	2 EA
816015	VIDEO INTERFACE EQUIPMENT	1 EA
818004	10 FOOT BREAKAWAY PEDESTAL POLE	6 EA
818021	STEEL POLE WITH A SINGLE 50 FOOT MAST ARM	1 EA
831010	250 WATT HPS LAMP AND LUMINAIRE	1 EA
833062 833060	3 1/2 INCH DIAMETER POLYVINYL CHLORIDE CONDUIT, SCHEDULE 80, RISER	50 10 LF
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	8 EA
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	12 EA
86103	15' LIGHTING ARM ON SIGNAL STRUCTURE	1 EA
861101	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	285 LF
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	330 LF
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	180 LF
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC	150 LF
861117	ELECTRICAL CABLE - 3 WIRE (NO. 4 AWG)	25 LF
871202	INSTALL CONTROLLER CABINET - BASE MOUNT	1 EA
873001 800000	REMOVE AND SALVAGE EXISTING EQUIPMENT	1 EA

C. EQUIPMENT TO BE REMOVED

Montgomery County Forces shall remove the controller and all auxiliary equipment from the controller cabinet. The cabinet and all other removed signal materials are to become property of the contractor.

D. EQUIPMENT TO SUPPLIED BY MONTGOMERY COUNTY

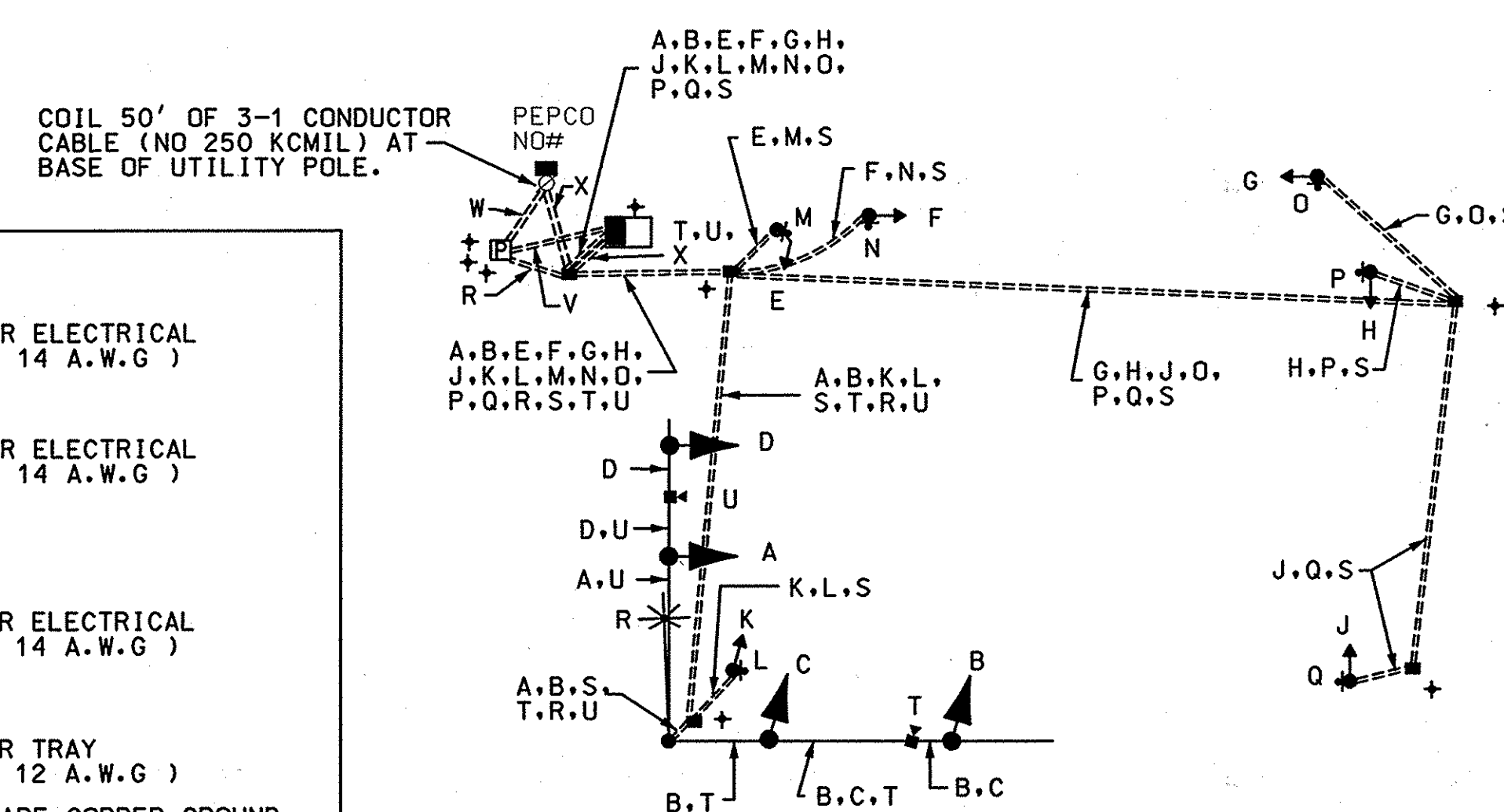
Montgomery County splice cabinet

ADDENDUM 1: DATE: 10-16-07

PHASE CHART

	1	2	3	4	5	6	7	8	9	10
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2	G	G	R	R	WK	WK	DW	DW	DW	DW
PED CLEAR / COUNTDOWN	G	G	R	R	FL/DW	FL/DW	DW	DW	DW	DW
2 CHANGE	Y	Y	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	R	R	G	G	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	Y	Y	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	G	G	DW	DW	WK	WK	WK	WK
PED CLEAR / COUNTDOWN	R	R	G	G	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	Y	Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

- A - 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B - 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- C - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- D - 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
- E - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- F - CONTROL CABLE (CAMERA TO CONTROLLER) 250'
- G - 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- H - 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 250 KCMIL)
- I - 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED)
- J - GROUND ROD

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 410 (EAST-WEST HIGHWAY)
AND CHELTON ROAD

GENERAL INFORMATION SHEET

SCALE NONE DATE 6/18/07 CONTRACT NO. MD2825185

DESIGNED BY JWA COUNTY MONTGOMERY
DRAWN BY RC LOGMILE 15041000.35
CHECKED BY TIMS NO. H162
F.A.P. NO. AC-STPG-000A(241)E TOD NO.

TS NO. 53C DRAWING NO. 2 OF 3 SHEET NO. 12 OF 42



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PLOTTED: 8/24/2007
FILE: 5136cgl.dgn